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ABSTRACT

A differential fee policy was adopted at the Open Learning Institute (OLI) of Hong Kong after a process of conceptualization, planning, proposal, approval and implementation. Under the differential fee policy different tuition rates were charged for different courses. The differential fee policy was conceptualized at OLI based on economics, financial, social, marketing, and operational considerations. Supply and demand economics provided the theoretical basis for the concept. Financial gains were anticipated due to the elasticities scenario, inflow of new students, and their course enrollments. Empirical evidence from market research surveys and interviews indicated that there could be support among students and the public for such a scheme. Lowering fees for entry level classes could dispel a perception that OLI fees were high. The new policy would not lead to any significant increase in operational efforts. Financial analysis indicated that income would increase by 15 percent immediately through fees and by 90 percent in throughput income. Student, staff and leadership concerns were overcome through talks with the student union, meetings with staff, and work with the governing council. Since the new fee structure was approved in 1992, enrollment has increased 8 percent, and overall fee revenue has increased by 23 percent. There have not been complaints or media queries about the policy. (JB)

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Differential Fee : From conceptualization to implementation

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Abstract

The idea of differential fee - different tuition fee for different courses - is not hard to understand, but the potential benefits or pitfalls of it require careful economic, financial and social analysis. When its potential benefits are recognized, there are still a number of hurdles to face, coming from students, colleagues and governing council. This paper illustrates how a radical idea to change the status quo of a major and crucial aspect of the operation of a higher education institution - pricing of its tuition - was conceptualized and how it went through different stages of discussion and consultation to its final implementation.

1. Introduction

The paper illustrates how a radical idea to change the status quo of a major and crucial aspect of the operation of a higher education institution - pricing of its tuition - was conceptualized and how it went through different stages of discussion to implementation. The idea in question is Differential Fee - charging different fees for courses of the same credit values based on some other criteria, in this case level of the course.

2. Literature Review

Researches were done on the subject in the CD-ROM database, ERIC (Jan 1982 to September 1994) and through the E-AIR network. The authors have found the following four cases of implementation of differential fee in US institutions :

- i. 1993 : Higher fee for students with baccalaureate or higher degree taking up courses at California Community Colleges.
- ii. 1989 : Formulation of a long-term nonresident tuition fee policy for California's public colleges and universities, and consideration of a higher fee for nonresident professional students in high-cost disciplines.
- iii. 1993 : Implementation of a higher fee for students taking the Project ABLE (Academic Bridges to Learning Effectiveness) program at Longview Community College, Kansas City, Missouri.
- iv. 1994 : Implementation of a three-tiered pricing scheme called the Instructional Service Fee (ISF) at Prince George's Community College in Largo, Maryland.

A common characteristic of these schemes are that except for case i., all of them are cost-based decisions. Case i. is an interesting study case as the policy met with disastrous results and had to be rescinded. The main complaint against the policy was that it was borne out of budgetary consideration rather than educational policy reasons. It led to tremendous drop in enrollment and deterred people from taking courses for job training needs. Enrollment of non-degree students did not increase either. The policy was judged to be "an almost complete disaster." (Trombley (1993)). This case illustrates the

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importance of social acceptance in policy making, in addition to budgetary considerations.

Another interesting point was raised in case ii, in which the report stated the California resident fee policy of ensuring fee increases "be gradual, moderate, and predictable ...". This is also a consideration of the implementation of the differential fee policy at the Open Learning Institute of Hong Kong as described in later paragraphs.

The literature review shows that a comprehensive analysis has to be done for considering the implementation of differential fee policy, as is true for any other significant policy decisions.

3. Background

3.1 Higher education scene in Hong Kong

There are nine higher education, degree-awarding institutions in Hong Kong formally recognized by the Hong Kong Government. They provide sub-degree, degree and postgraduate education to over 90,000 students in 1994 in a city with population of over six million. Participation rate of first degree places for 17-20 age group grew rapidly in the last few years and it now stands at 18%

Eight of these institutions are more than 80% funded by the government, with one being run on self-financing basis - the Open Learning Institute of Hong Kong.

3.2 The Open Learning Institute of Hong Kong (OLI)

The OLI was established by the Hong Kong government in 1989 to offer degree studying opportunities to working adults in Hong Kong. Some key statistics of the OLI as of 1994/95 are as follows :

Number of active students : 18,000

Annual Tuition Fee Income : HK\$250M (US\$35M approx.)

Number of Degree Programmes : 22

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Number of Sub-degree Programmes : 15

Its unique features among the higher education institutions in Hong Kong include :

- o Open learning philosophy : All adults above the age of 17 may enroll, irrespective of previous educational qualifications. Students can study a course or a degree programme for as long as or as short as they wish. As a result, student attrition rate is high compared with that of conventional institutions but is normal within the open learning context;
- o Distance learning method : The OLI basically practices distance learning with a high degree of sophistication and technical advances. Students study with course guides, textbooks, audio-visual materials on their own with help from part-time tutors.
- o Credit System : The OLI adopts the US-type credit system, compared with the UK-type course-by-course system of most other institutions in Hong Kong.
- o Fee Scale : Fees are charged on a per credit basis, compared with the yearly payment of most other institutions in Hong Kong.

3.3 Overview of methods of charging tuition fee in Hong Kong

Fees of all eight government-funded institutions are charged on a yearly basis for a British-type 3-year Bachelor's degree programme. The yearly fee is the same for whatever level of study the student is at. Outside government-funded institutions, fees are charged on a variety of methods, such as equal fee for all courses, single fee for the whole programme, upfront lump-sum payment with installment option, etc. Cases of differential fee for courses with equivalent credit values or study loads are very, very few.

4. Conceptualization

The differential fee policy was conceptualized at the OLI based on economics, financial, social, marketing and operational considerations.

4.1 Economics

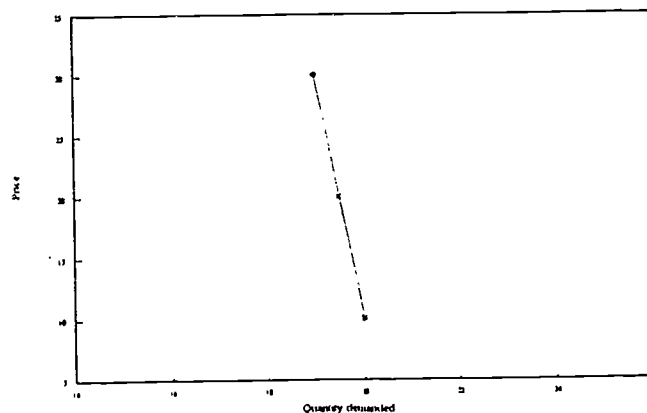
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The fundamental economics of supply and demand provides the theoretical basis for the differential fee concept.

- o Supply : This is essentially a cost-based consideration that was the driving force of most cases of differential fee the authors have found. Basically, the higher the level of the course, its unit cost of delivery would be higher because of :
 - smaller number of students;
 - the need to recruit tutors with higher qualifications; and
 - higher costs of course materials.Therefore, if a certain contribution margin (fee income less variable/direct costs) is to be maintained, then a higher fee level has to be set. Reverse arguments apply for lower/foundation level courses.
- o Demand : The higher the level of the course, the more price inelastic the demand is because :
 - the students studying at higher levels are more mature students who are likely to have attained higher income and wealth; and/or
 - the students need the courses for graduation

Figure 1

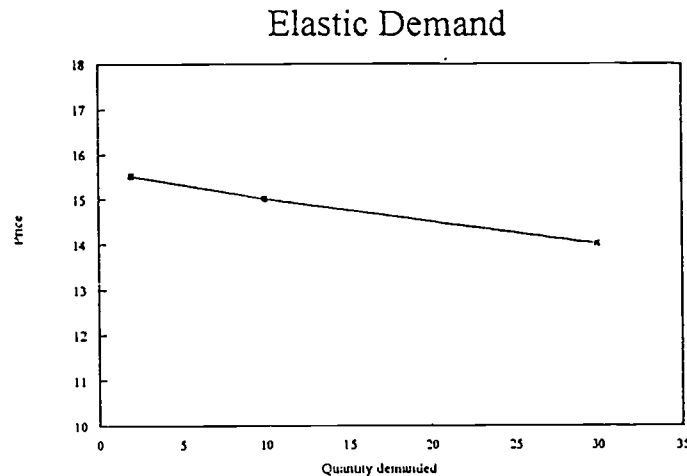
Inelastic Demand



Therefore, even if a higher fee scale is imposed on the higher level courses, the loss in students would be less than proportional, so that the total fee income would increase. On the other hand, the lower the level of the course, the more price elastic the demand is because

- the students have more choices at foundation level; and/or
- the students will tend to be younger with lower income and wealth.

Figure 2



Therefore, a lower fee scale will draw a more than proportional increase in student bodies, so that the total fee income would also increase.

A crucial point has to be noted here. The attraction of new students will increase fee income not only in the current semester, but more importantly they will stay in the system for various lengths of study. The fee income contribution from this increase in new students is most considerable and is the main financial benefit that the policy provides.

4.2 Financial

Given the price elasticities scenario and the inflow of new students and their subsequent course enrollments, considerable financial gains could be expected from this policy. A more detailed analysis is described in the paragraph 5.2 : Financial Planning.

4.3 Social

All the economic and financial analysis would be useless if the students/public do not accept the idea. However, there were two empirical evidence that

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provided strong support. Firstly, in education systems all over the world, it is very common to charge a higher unit fee for higher degrees than for Bachelor's degree levels. In effect, a differential fee system has been adopted at the programme level for many years, albeit not so obvious to casual observers. The differential fee policy proposed here was basically an extension of the concept to course level.

Secondly, before the full-fledged implementation, the Institute had in fact adopted a differential fee policy albeit on a minor scale in charging a fee for courses with laboratory classes. No complaints were heard from students.

Based on the two points above, it was hypothesized that the public and the students should accept such a system. Evidence of the acceptance was to be provided by market research, covered in paragraph 4.1.

4.4 Marketing

Ever since its establishment, the OLI's fee has been perceived to be high. By lowering the fee for entry level courses, this could help dispel the image of a high fee institution and thus help enrollment further.

4.5 Operation

Many good policy ideas suffer from the entailment of high and complex operational support which makes the original idea not cost effective. However, the differential fee policy would not lead to any significant increase in operational efforts.

5. Planning

5.1 Market Research

Two mailed surveys were conducted in early 1992 on two market segments of the OLI : Inactive students (OLI students who have not taken any course at the time of survey) and non-degree primary and secondary school teachers (non-OLI students). A question on differential fee was inserted in the surveys. It was found that 65% of the inactive students and 75% of the teachers supported

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the idea (despite the fact that they were consumers and consumers were known to be highly skeptical on prices charged).

Face-to-face interviews were also conducted with some existing students. Their main concern was naturally the higher fee for higher level courses, but they realized that higher level courses incurred higher costs of provision and therefore thought it fair to pay a higher fee for them. They also appreciated the benefit it would bring to new students with the lower fees.

Therefore, social acceptance was ascertained.

5.2 Financial Planning

With economic theories as a basis, the financial feasibility of the policy was evaluated. Factors to consider in the financial modeling include :

- o Price elasticities i.e. if fee is increased by 10% for higher level courses, what would the drop in demand be, assuming price inelasticity ? If fee is decreased by 10% for foundation level courses, what would the increase in demand be, assuming price elasticity ?
- o Average student attrition rate. The higher it is, the lower the number of additional courses that the new students attracted by the lower fee are going to take, and the lower the financial benefit.

The following scenario was assumed for the analysis :

Table 1 : Scenario assumption

Level	Fee Change %	Demand Change %
Foundation	-10%	+15%
Middle	0%	0%
Higher	+10%	-5%

The historical attrition rates were used. (Calculation of these rates is too complicated for this paper and hence is not covered in details here.)

Table 2 : Retention Rates

Retention Semester	Semester Retention Rate	Cum Retention Rate
RS0	100.0%	100.0%
RS1	65.8%	65.8%
RS2	59.0%	38.8%
RS3	82.3%	32.0%
RS4	86.6%	27.7%
RS5	90.0%	24.9%
RS6	91.1%	22.7%

RSn = Returning Semester = the number of the semester that the same cohort of students is continuing their study.

Semester Retention Rate = Student(n)/Student(n-1) of the same cohort and averaging the corresponding rates of all cohorts together.

Cumulative Retention Rate = Student(n)/Student(0) i.e. the number of students of the current semester divided by the number of students at the beginning semester when they started their study and averaging the corresponding rates of all cohort together.

The financial gains consist of two parts :

- i. Immediate = (Fee change X Demand change X (1-VC%)) at semester n, all courses, where VC% = variable cost %; and
- ii. Throughput = (New students attracted X retention rates X average number of credits per semester per student X fee per credit X (1-VC%)) of semesters n, n+1, n+2 n+9 (assuming a student graduates in 10 semesters).

The financial analysis indicated that there would be about 15% increase in fee immediate income, with the Throughput income being a major factor, taking up about 90% of the total increase.

The potential financial gains are therefore very considerable.

6. Proposal

6.1 Concerns

There were hurdles from three parties/stakeholders to face : students, staff and governing council.

- o Students : If not properly informed, the Student Union might perceive the policy as purely another attempt by the institute to raise tuition fee.
- o Staff : The OLI has a Management Board comprising of the Director (Vice chancellor equivalent), Associate Director (Pro-vice chancellor equivalent), administrative unit heads and faculty heads to discuss management policy issues. Not all of them are conversant with economic theories and financial modeling and therefore they may find the concept a bit hard to grasp. Some were also concerned that with a lower fee for lower level courses, the Institute might lose income.
- o Governing Council : Under the OLI Ordinance, “the power of the Institute to fix fees and charges .. “ [Chap 1145,4(m)] rests with its Governing Council whose members are appointed by the Governor of Hong Kong. Their concern fell mainly on the affordability of the new fees to the students and at the same time the recovery of the costs of delivering the courses. They were concerned whether the students would so dislike the policy that they would start complaining and petitioning and therefore plunging the Institute into a media crisis and affecting the Institute’s image.

6.2 Strategies to overcome concerns

- o Talks were held with representatives of the Student Union. Since the policy itself has sound theoretical arguments for it, there was nothing to hide and a frank and honest stance was adopted. Despite facing higher fees, the students accepted the policy on its merit.
- o The KISS approach (Keep It Short and Simple) was used in explaining the message to colleagues in the Institute. Basically the points to emphasize were more new students who will study for a longer time, and fee income would most likely increase even under very conservative

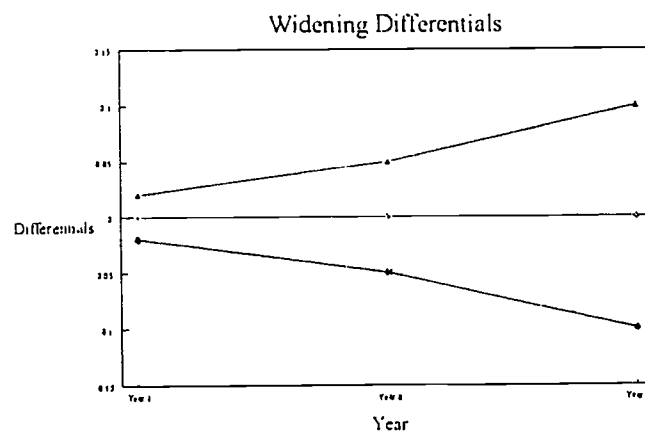
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scenarios. Instead of giving out jargons and pages of scenarios analysis, the staff were advised of the policy in layman terms.

Naturally, even with this approach, there were still a lot of arguments for and against it. The proposal took more than a year before it could get the managers' approval.

- o Governing council : To alleviate their concern about the students' feelings, the magnitude of the differentials was made very small in the beginning - less than 1% difference between two levels. However, some might query that such a small magnitude would not reflect the cost differentials of the courses quite adequately and therefore a conscious plan was drawn to widen the differentials in later years.

Figure 3



An interesting principle point was raised by the Council in that the implementation of the differential fee policy should be based on a revenue neutral principle. By this they meant that the budgeted income of the semester/year should remain the same with differential fee compared with the original income on uniform fee scale. The most likely scenario of this to happen is that the lower fee income due to the lower fee scale for foundational courses was compensated by the increase in fee income from higher fee scale for Higher level courses, assuming the enrollments at these two levels will not change or change in an offsetting manner. This looks to be a concern based purely on accounting/budgetary consideration rather than on an estimation of the most likely scenario and spirit of the differential fee idea, which

principally suggests that enrollments will change and fee income will very likely increase.

7 Approval and Implementation

The policy was proposed in July 1992 and was approved by the governing council in May 1994 to be implemented for October 1994 recruitment. Policy statements were carefully worked out before hand to prepare for press queries and student complaints about the policy and the concurrent overall fee increase of 21% (versus inflation of around 10%). To minimize confusion, the students were informed of a single fee amount per course instead of explanations about the differential fee policy and other fees such as laboratory fees.

8. Results

Despite the relatively big fee increase, the number of students went up by 8%. The overall fee revenue was increased by 23%, more than proportional to the fee increase. No student complaint or press query about the policy was received.

Overall, the policy can be considered to be a big success and is to be continued in semesters to come.

9. Evaluation

- o The differential fee concept is theoretically sound and highly practicable. It may take on different formats of implementation for different institutions, depending on the environment that the institution is operating in..
- o The policy's contribution to the growth in students and fee income should be ascertained, although such correlation cannot be mathematically proven from empirical evidence.
- o Starting out on a small scale has proven to be a wise move, evidenced by the lack of complaints or queries. Whether that would still be the case if the gaps between fees get larger remains to be seen.
- o Internal opposition turned out to be bigger than expected. Many colleagues failed to grasp the point about the main benefit of more new

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students and subsequent throughput, and as a result many simply chose to ignore it.

10. Conclusion

This paper serves to describe the differential fee policy adopted at the Open Learning Institute of Hong Kong from conceptualization, planning, proposal, approval and implementation. The policy has a sound theoretical and practical basis and is recommended for consideration by other educational institutions.

The concept could be expanded further based on criteria other than level of the course, such as faculty (e.g. Business vs Science vs Arts), subjects (e.g. computer vs mathematics vs accounting), etc. The popularity factor i.e. demand, will play a big part in determining the differentials in the fees of different courses using these approaches. The main questions to address are : How can the "popularity" of these courses objectively determined ? Will the faculty members whose courses are determined to be less "popular" willingly accept such results with the long-term implications it might bring ? The authors have been considering these issues for some time and will share with the academic community about our findings should there be new developments in the differential fee policy at the Open Learning Institute of Hong Kong.

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